



---

# **UNITED STATES AIR FORCE JOINT BASE ELMENDORF-RICHARDSON ALASKA**

## ***ENVIRONMENTAL RESTORATION PROGRAM***

### **EXPLANATION OF SIGNIFICANT DIFFERENCES SD025**

**FINAL**

**MARCH 2017**





FINAL

EXPLANATION OF SIGNIFICANT DIFFERENCES OPERABLE  
UNIT 4: SD025

JOINT BASE ELMENDORF-RICHARDSON, ALASKA

Prepared for  
Air Force Civil Engineer Center

Contract No. FA8903-09-D-8589 / Task Order 0016

MARCH 2017

*This page intentionally left blank.*

---

## TABLE OF CONTENTS

---

Section	Page
TABLE OF CONTENTS .....	i
LIST OF ACRONYMS .....	ii
1.0 INTRODUCTION AND STATEMENT OF PURPOSE.....	1
2.0 SITE HISTORY, CONTAMINATION, AND SELECTED REMEDY .....	2
2.1 Site Description .....	2
2.2 Site Name .....	2
2.3 Site History, Contamination, and Selected Remedy .....	2
3.0 BASIS FOR THE DOCUMENT .....	4
4.0 EXPLANATION OF SIGNIFICANT DIFFERENCES.....	4
5.0 AGENCY COMMENTS .....	4
6.0 STATUTORY DETERMINATIONS .....	4
7.0 PUBLIC PARTICIPATION COMPLIANCE .....	5
AUTHORIZING SIGNATURES .....	6
REFERENCES.....	7



---

**LIST OF ACRONYMS**

---

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ARARs	applicable or relevant and appropriate requirements
BTEX	benzene, toluene, ethylbenzene, and xylenes
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
COCs	contaminants of concern
DRO	diesel-range organics
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FFA	Federal Facility Agreement
GRO	gasoline-range organics
ICs	Institutional Controls
JBER	Joint Base Elmendorf-Richardson
JBER-E	former Elmendorf Air Force Base
LFI	Limited Field Investigation
MNA	Monitored Natural Attenuation
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	No Further Action
OU	Operable Unit
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
USAF	United States Air Force



## **1.0 INTRODUCTION AND STATEMENT OF PURPOSE**

This Decision Document presents an Explanation of Significant Differences (ESD) for Site SD025 located within Joint Base Elmendorf-Richardson (JBER) on the former Elmendorf Air Force Base (JBER-E) adjacent to Anchorage, Alaska. The Record of Decision (ROD) addressed by this ESD was signed in October 1995 for Operable Unit (OU) 4 associated with the former Elmendorf Air Force Base (Comprehensive Environmental Response Compensation and Liability Information System [CERCLIS] ID AK8570028649).

Operable Unit 4 was divided into seven study areas, and the ROD described the selected remedy for each of these study areas. Hangar 11 (now known as Building 16430) was identified as one of the seven study areas, and SD025 was identified in the ROD as a contaminant source area associated with Hangar 11.

This ESD has been prepared to change the governing regulatory authority and the applicable environmental regulations for implementing remediation at SD025. Specifically, the status of the site changes from remedial action implementation to No Further Action (NFA) under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA, 1980) in order to allow future remediation to be managed under 18 Alaska Administrative Code (AAC) 75 (Oil and Other Hazardous Substances Pollution Control) revised as of November 6, 2016, 18 AAC 78 (Underground Storage Tanks, amended as of December 3, 2016), and supporting State of Alaska guidance documents.

This regulatory action is warranted because the contaminants of concern (COCs) for SD025 are either petroleum hydrocarbon compounds or are derived from petroleum hydrocarbon compounds, which are excluded substances under CERCLA §101(14). No CERCLA COCs that are not naturally present in petroleum were identified for SD025.

The United States Air Force (USAF) is the Potentially Responsible Party and the United States Environmental Protection Agency (EPA) Region 10 is currently the lead regulatory agency. This ESD is issued in accordance with CERCLA § 117(c) 42 U.S.C. § 9601 et seq. (as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 40 C.F.R. § 300.435(c)(2)(i).

As a result of this ESD, the Alaska Department of Environmental Conservation (ADEC) will become the lead regulatory authority for SD025 upon signature of the ESD.

In accordance with 40 C.F.R. § 300.825(a)(2), this ESD and supporting documents will become part of the Administrative Record for the site. The Administrative Record is available for review at the following locations:



Alaska Resources Library and Information Services (ARLIS)  
Library Building, Suite 111  
3211 Providence Drive  
Anchorage, AK 99508  
(907) 27-ARLIS  
Hours: Monday – Friday, 8:00 am – 5:00 pm

## **2.0 SITE HISTORY, CONTAMINATION, AND SELECTED REMEDY**

### **2.1 Site Description**

SD025 is located north of the east/west runway and west of Building 16430 (formerly known as Hangar 11) on JBER-E. Building 16430 has been and is currently used for aircraft maintenance. SD025 primarily consists of a level field of grass with an upward slope in the northern portion of the site. A steel-framed, open-sided storage building (Building 16414) with slab foundation is located on the western side of the site. The coordinates for the center of SD025 are 61.2592 °N latitude and 149.8184 °W longitude (using Google Earth with aerial photography dated 22 October 2012).

SD025 is listed in the State of Alaska Contaminated Sites Database as having Hazard Identification Number 432, and the site status is listed as “Cleanup Complete – Institutional Controls (ICs).”

### **2.2 Site Name**

The SD025 site name was first used as a contaminant source area name in a 1992 Limited Field Investigation (LFI) Report (USAF, 1992) for Elmendorf Air Force Base. The LFI Report referred to investigation areas adjacent to Hangar 11 (formerly known as Building 42-425 in 1992; now known as Building 16430) as SD025.

The 1994 OU 4 Remedial Investigation/Feasibility Study (RI/FS) (USAF, 1994) did not specifically reference the SD025 site name, but it reported on the contamination assessment, risks, and remedial action alternatives for investigation areas adjacent to Hangar 11. One of these investigation areas became known as SD025.

Section 2.2 of the 1995 OU 4 ROD and Table 2-1 from that document identify SD025 as an OU 4 contaminant source area and note that SD025 was associated with former Building 42-425 (Hangar 11). Section 5 (Remedy Selection) of the OU 4 ROD discusses the remedy selection for Hangar 11. The Hangar 11 ROD remedy served as the remedy selection for SD025.

### **2.3 Site History, Contamination, and Selected Remedy**

Elmendorf Air Force Base was placed on the National Priorities List in August 1990, and a Federal Facility Agreement (FFA) (USAF, 1991) for the installation was subsequently signed in November 1991 by the USAF, EPA Region 10, and ADEC. The FFA set deadlines, objectives,





responsibilities, and procedural framework for the cleanup of contaminated sites at Elmendorf Air Force Base that were regulated under CERCLA.

In accordance with the FFA, contaminated areas at Elmendorf Air Force Base were evaluated using the RI/FS approach. For the purpose of conducting RI/FS's, the Base was divided into seven OUs (OU 1 through OU 7); each OU was managed as a separate region with its own RI/FS. Operable Unit 4 was further divided into seven study areas; one of the study areas was Hangar 11 (now Building 16430). The CERCLA RI/FS for OU 4 was completed in September 1994 (USAF, 1994).

Petroleum contamination at the SD025 location at Hangar 11 resulted from the release of jet fuel and similar products from former underground valve pits associated with an underground fuel transfer pipeline. The valve pits were removed in 1995 and the underground fuel line was abandoned in place. Soil and groundwater have been impacted by the petroleum release. All of the COCs identified in the OU 4 ROD for the SD025 location at Hangar 11 were petroleum compounds or contaminants derived from petroleum compounds.

The USAF issued an OU 4 Proposed Plan for public comment in April 1995 (USAF, 1995). The Proposed Plan identified Alternative G2/S2/S5 as best meeting the nine CERCLA evaluation criteria while being protective of human health and the environment. Alternative G2/S2/G5 consisted of ICs with intrinsic remediation (hereinafter referred to as monitored natural attenuation [MNA]) for groundwater and shallow soils (< 5 feet below ground surface), and bioventing for deep vadose zone soils (> 5 feet below ground surface).

The Elmendorf Air Force Base OU 4 ROD was signed in October 1995 (USAF, 1995); it identified Alternative G2/S2/S5 as the selected remedy for Hangar 11 (SD025). The ROD identified chemical-specific applicable or relevant and appropriate requirements (ARARs) for the following petroleum and petroleum-derived soil COCs at Hangar 11 (SD025):

- Gasoline-range organic (GRO) compounds
- Diesel-range organic (DRO) compounds

The ROD identified chemical-specific ARARs for the following petroleum-derived groundwater COCs at Hangar 11 (SD025):

- Benzene
- Toluene
- Ethylbenzene

Remedial Alternative S5 (bioventing) was initiated at SD025 in November 1995 to remediate vadose zone soils deeper than 5 feet below ground surface. Soil sampling conducted in 1996, 1999 and 2002 yielded analytical results that demonstrated that vadose zone soils at all depths met their

respective ROD cleanup levels. ADEC issued the USAF an NFA letter for the SD025 soils in 2003 (USAF, 2003).

Annual groundwater sampling and laboratory analysis has occurred at SD025 since 1995 under the MNA program. The 1995 ROD estimated that groundwater concentrations would meet cleanup levels by 2008; however, groundwater concentrations in 2014 still exceed their respective cleanup levels.

The CERCLA Five-Year Review (USAF, 2014) recommended that alternative groundwater remedies be evaluated to accelerate the cleanup schedule at SD025. This evaluation is ongoing, and will be completed upon execution of the ESD and transfer of the regulatory authority from EPA to ADEC.

### **3.0 BASIS FOR THE DOCUMENT**

This ESD supports the Elmendorf Air Force Base OU 4 ROD signed in October 1995. The ROD identified petroleum compounds and petroleum-derived compounds as the only COCs requiring remediation at Hangar 11 (SD025). Due to petroleum hydrocarbon compounds being excluded substances under CERCLA §101(14), SD025 is more appropriately regulated under the authority of the State of Alaska. Specifically, SD025 is adequately regulated under 18 AAC 75 and 18 AAC 78, which are administered by ADEC.

### **4.0 EXPLANATION OF SIGNIFICANT DIFFERENCES**

This ESD is issued to change the status of SD025 to NFA under CERCLA, and to concurrently transfer the regulatory authority for the site from EPA to ADEC. ADEC will become the lead regulatory authority upon final signature of this ESD.

### **5.0 AGENCY COMMENTS**

EPA and ADEC reviewed this ESD, and both support the transfer of the governing environmental regulations and the lead regulatory authority from EPA to ADEC.

### **6.0 STATUTORY DETERMINATIONS**

The remedy for SD025, as modified by this ESD, continues to satisfy the statutory requirements of CERCLA § 121 (42 U.S.C. 9621) for protection of human health and the environment, and complies with federal and state requirements in the OU 4 ROD that are applicable or relevant and appropriate as required by the NCP Sections 300.430(f)(1)(ii)(B)(1) and (2).

## **7.0 PUBLIC PARTICIPATION COMPLIANCE**

The public participation requirements set out in the NCP, 40 C.F.R. § 300.435(c)(2), have been met by adding the ESD and supporting information to the administrative record established under CERCLA § 300.815, and by making it available to the public in the Administrative Record located at the ARLIS, Anchorage, AK 99508, telephone 907-27-ARLIS. In addition, when the ESD is issued, a public notice of its availability will be published in the *Alaska Dispatch News* and the *Chugiak Eagle River Star*.




---


## AUTHORIZING SIGNATURES

---


This signature sheet documents the concurrence of the United States Air Force, the United States Environmental Protection Agency, and the Alaska Department of Environmental Conservation for the changes documented in this Explanation of Significant Differences for Site SD025, JBER-E, Alaska. By signing this declaration, all parties concur that proper implementation of the selected remedy will comply with state and environmental laws. This decision will be reviewed and may be modified in the future if information becomes available that indicates the presence of contaminants or potential exposures that may present an unacceptable risk to human health or the environment.

  
SUZANNE W. BILBREY, P.E., GS-15, DAF  
Director, Environmental Management Directorate

1/17/2018  
Date

  
Kim DeRuyter  
DSMOA Section Manager  
Federal Facilities Section, Contaminated Sites Program  
Alaska Department of Environmental Conservation

3/29/17  
Date

  
Dennis Faulk  
EPA Region 10 Federal Facility Program Manager  
United States Environmental Protection Agency

4/3/17  
Date

## REFERENCES

---

- Alaska Department of Environmental Conservation (ADEC), 2015. *Contaminated Sites Database*. March.
- ADEC, 2016. *Oil and Other Hazardous Pollution Control Regulations – Discharge Reporting, Cleanup, and Disposal of Oil and Other Hazardous Substances*, 18 AAC 75. November.
- ADEC, 2016. *Underground Storage Tanks*, 18 AAC 78. December.
- ADEC, 2003. *Notice of No Further Action for Operable Unit 4 Source Area SD25 Facility ID No. 1525, Reckey No. 198821X933603*. January.
- United States Air Force (USAF), 2014. *Fourth CERCLA Five-Year Review Report*. Joint Base Elmendorf-Richardson (JBER), Alaska. March.
- USAF, 1995. *Record of Decision Operable Unit 4*. United States Air Force Elmendorf Air Force Base, Alaska. October.
- USAF, 1995. *Elmendorf Air Force Base Operable Unit 4 Proposed Plan for Remedial Action*. United States Air Force Elmendorf Air Force Base, Alaska. April.
- USAF, 1994. *Final Remedial Investigation/Feasibility Study Report, Operable Unit 4*. United States Air Force Elmendorf Air Force Base, Alaska. September.
- USAF, 1992. *Final Operable Unit 4 Limited Field Investigation Report*. United States Air Force Elmendorf Air Force Base, Alaska. November.
- USAF, 1991. *Federal Facility Agreement*. United States Air Force Elmendorf Air Force Base, Alaska. September.
- United States Environmental Protection Agency (EPA), 1994. *National Oil and Hazardous Substances Pollution Contingency Plan*. 40 CFR 300. October.
- EPA, 1986. *Superfund Amendments and Reauthorization Act*. Public Law 99-499. October.
- EPA, 1980. *Comprehensive Environmental Response Compensation and Liability Act*. Public Law 96-510, 42 U.S.C. 9601 – 9675. December.

*This page intentionally left blank.*

